WE CLAIM:

1. A method for image acquisition, comprising the steps of:

acquiring an image using a digital imaging system;

sensing a temporal change in an image at a pixel level or pixel region level while acquiring the image;

defining regions of the image at which said temporal change has been sensed during the image acquisition;

generating metadata corresponding to said defined regions; and

providing said metadata with image data when outputting the image data.

2. A method as claimed in claim 1, wherein said temporal change is a motion related change in at least a portion of the image.

3. A method as claimed in claim 2, wherein said motion related change is a result of motion of at least one object in the image while acquiring the image.

4. A method as claimed in claim 1, wherein said metadata is a mask corresponding to said defined regions.

5. A method as claimed in claim 4, wherein said mask is blur mask.

6. A method as claimed in claim 1, wherein said step of defining includes classifying pixels as stationary or blurred.

7. A method as claimed in claim 6, further comprising the step of:

defining ones of said pixels as partially blurred.

8. A method as claimed in claim 1, further comprising:

sampling at least ones of said pixels or said pixel regions during acquisition of image data for an image.

9. A method as claimed in claim 8, further comprising the step of:

determining a presence of a change in a rate of image signal accumulation at pixels or pixel regions during the acquisition of the image, said change indicating motion during the acquisition of the image.

10. A method as claimed in claim 8, wherein said sampling is performed a plurality of times during the acquisition of the image.

11. A method as claimed in claim 10, further comprising the step of:

generating a event time mask identifying times during the image acquisition at which an event occurred in the signal accumulation as detected by said sampling.

12. A method as claimed in claim 11, wherein said times are identified by sample sequence number.

13. A method as claimed in claim 1, further comprising the step of:

identifying pixels or pixel regions receiving a signal intensity below a predetermined low signal threshold during the image acquisition.

14. A method as claimed in claim 1, further comprising the step of:

identifying pixels or pixel regions receiving a signal intensity above a predetermined high signal threshold during the image acquisition.

15. A method as claimed in claim 14, further comprising the step of:

generating an exposure mask of areas having pixels or pixel regions above said predetermined high signal threshold.

16. A method as claimed in claim 14, further comprising the step of:
identifying pixels or pixel regions receiving a signal intensity below a predetermined low signal threshold during the image acquisition.

17. A method as claimed in claim 16, further comprising the step of:
generating an exposure mask of areas having pixels or pixel regions above said predetermined high signal threshold and of areas having pixels or pixel regions below said predetermined low signal threshold.

18. A method as claimed in claim 16, further comprising the step of:
generating a event time mask identifying times during the image acquisition at which an event occurred in the signal accumulation as detected by said sampling.

19. A method as claimed in claim 18, further comprising the step of:-
outputting said event time mask and said exposure mask and said blur mask as meta-data accompanying image data obtained during the image acquisition.

20. A method as claimed in claim 14, wherein said predetermined high signal threshold is near or at a saturation level for the pixel or pixel region.

21. A method for image acquisition, comprising the steps of:
acquiring an image using a digital imaging system;
sampling pixels during said step of acquiring the image;
determining a change in intensity build up in pixels during said step of acquiring the image;
defining regions of the image which have a change of intensity build up of greater than a predetermined threshold; and
including information on said regions with data of the image.

22. A method as claimed in claim 21, wherein said information on said regions is mask information.

23. A method as claimed in claim 21, wherein said change in intensity corresponds to motion of at least one object whose image is being acquired during the acquiring of the image.

24. A method as claimed in claim 21, wherein said change in intensity corresponds to saturation of at least one pixel.

25. A method for image acquisition, comprising the steps of:
acquiring an image using a digital imaging system;
sensing pixels at or near saturation during said acquiring of the image;
sensing pixels below a predetermined threshold of light intensity;
defining regions of the image with pixels at or near saturation and regions below said predetermined threshold;
including information on said regions with data of the image.

26 An apparatus for image acquisition, comprising:
an optical system for focusing an image on a sensing chip;
a sensing chip positioned to receive said image from said optical system;
a processor connected to said sensing chip for two way communication with said sensing chip, said processor generating meta-data regarding regions of the image corresponding to predetermined conditions, said processor including said meta-data with data of said image upon output of the image.

27. An apparatus as claimed in claim 23, wherein said meta-data includes at least one of an event time mask and an exposure mask and a blur mask.